Description of the harmfull impact on the environment from the retrieval and conversion of fossil fuels to energy.

The technical definition of fossil fuels is "incompletely oxidized and decayed animal and vegetable materials, specifically coal, peat, lignite, petroleum and natural gas". The technical definition of fuel is "material that can be burned or otherwise consumed to produce heat". In our modernized western world, fossil fuels provide vast luxurious importance. We retrieve these fossil fuels from the ground and under the sea and have them converted into electricity. Approximately 90% of the world's electricity demand is generated from the use of fossil fuels.

There is a growing concern regarding the collaboration between fossil fuels and environmental pollution. Debates regarding this contamination have become commonplace in today's effort to sustain the earth's health. Fossil fuels are not considered a renewable energy source and aside from the environmental impact, the cost of retrieving and converting them is beginning to demand notice. Seemingly this issue has many different angles that need to be addressed in order to ensure future generations a sustainable living.

Combustion of these fossil fuels is considered to be the largest contributing factor to the release of greenhouse gases into the atmosphere. In fact it is believed that energy providers are the largest source of atmospheric pollution today. There are many types of harmful outcomes which result from the process of converting fossil fuels to energy. Some of these include air pollution, water pollution, accumulation of solid waste, not to mention the land degradation and human illness.

Evidence of the ill effects of fossil fuels is endless, and can take on many forms. Some forms are not easily seen by the human eye, although the disastrous results such as the loss of aquatic life can be seen somewhat after the fact. Carbon dioxide is considered the most prominent contributor to the global warming issue. The impact of global warming on the environment is

extensive and affects many areas. In the Antarctica, warmer temperatures may result in more rapid ice melting which increases sea level and compromises the composition of surrounding waters. Rising sea levels alone can impede processes ranging from settlement, agriculture and fishing both commercially and recreationally.

Air pollution is another problem arising from the use of fossil fuels, and can result in the formation of smog. Other than causing human illness, smog can also affect the sustainability of crops. Smog seeps through the protective layer on the leaves and destroys essential cell membranes. This results in smaller yields and weaker crops, as the plants are forced to focus on internal repair and do not thrive.

Many toxic substances are released during the conversion or retrieval process including "Vanadium" and "Mercury". According to the "New Book Of Popular Science", "it is suspected that significant quantities of Vanadium in the atmosphere results from residual fuel oil combustion".

When coal is burned, it releases nitrous oxide. Unfortunately this is kept in the atmosphere for very long time. The harmful impact of this chemical could take up to a couple of hundred years to make itself known. It is very difficult to prevent or to diminish an impact when you are not even aware of what it may be. The only solution in this case is to reduce the formation of nitrous oxide. Nearly 50% of the nitrogen oxide in the atmosphere and 70% of sulfur dioxide are direct result of emissions released when coal is burned.

Converting fossil fuels may also result in the accumulation of solid waste. This type of accumulation has a devastating impact on the environment. Waste requires adequate land space for containment and/or treatment, as well as financial support and monitoring for waste not easily disposed of. This type of waste also increases the risk of toxic runoff which can poison surface and groundwater sources for many miles. Toxic runoff also endangers surrounding vegetation, wildlife, and marine life.

Delivery of fossil fuels can result in oil spills, and many of us are familiar

with the impacts of this type of disaster. Seepage from foundations like that of oil rigs and pipelines can also result in similar destruction for habitat and wildlife. According to the Department Of The Interior, vast damage to waterways can be attributed to the extraction of coal. Coal extraction may very well be the leading the source of water pollution today.

Use of unleaded gas has helped to reduce the release of lead into the environment. Although in third world countries, the safer unleaded gas has not been fully utilized and is still a major concern. Unfortunately for developing countries, the economy and technology available to them is quite behind what we are used to. With this in mind many environmental issues are treated at an international level, which allows for more efficient handling.

We have become a very energy greedy generation and our demands for electricity are very high. As far as reducing the these harmful affects, we must first reduce our demand. Science may be able to find alternative, healthier sources, although not ones that meet the required supply. These types of horrendous impacts are felt globally and should not be considered one countries problem. Sometimes social limitations and/or economic stability can make the process of change very difficult. One thing is for sure, that by being more energy efficient and conservative, we will be helping to alleviate the toll on environmental and human health.